

Mount Vernon Memorial Highway: Fort Hunt Overpass
Carries the Mount Vernon Memorial Highway over the Fort
Hunt underpass, 5.9 miles south of I-95
Mount Vernon Vicinity
Fairfax County
Virginia

HAER No. VA-42C

HAER
VA,

30-____,

6-C-

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, DC 20013-7127

HISTORIC AMERICAN ENGINEERING RECORD

MOUNT VERNON MEMORIAL HIGHWAY:
FORT HUNT OVERPASS

HAER No. VA-42C

HAER
VA,
30-_____,
6-C-

Location: Carries the George Washington Memorial Parkway over the Fort Hunt underpass, 5.9 miles south of I-95 and 2.7 miles north of Mount Vernon in Fairfax County, Virginia.

UTM: 18/322040/4286930
Quad.: Mount Vernon

Date of Construction: Designed 1929, Completed 1932

Architect: Gilmore D. Clarke

Engineer: E.J. Budge, Resident Engineer
J.L. Shotwell, Assistant Resident Engineer
J.V. McNary, Senior Engineer,
U.S. Bureau of Public Roads

Contractor: Merritt-Chapman & Scott Corporation, New York, New York

Present Owner: George Washington Memorial Parkway
National Park Service
Department of the Interior

Present Use: Vehicular bridge

Significance: The Fort Hunt Overpass was one of the first group of parkway bridges to be operated and maintained by the U.S. Government. This bridge was built as a grade separation structure in conjunction with the Mount Vernon Memorial Highway and is different than the other bridges along this parkway because it has a facing of brick rather than stone. The bridge is designed as a two-hinged, spandrel-filled, reinforced concrete arch.

Historian: Elizabeth M. Nolin, 1988

The Fort Hunt Overpass on the Mount Vernon Memorial Highway (see HAER No. VA-42), is a grade separation structure which carries the parkway over a road leading from Fort Hunt to a dock on the Potomac River. The overpass is located on the grounds of the Fort Hunt military reservation in Virginia. The structure is a two-hinged, spandrel-filled, reinforced concrete arch which is faced with red brick. The arch barrel is sixty-five and one half feet in length, has a vertical clearance of sixteen and one half feet and a width of twenty-six feet at the spring line.

Excavation for the footings began on June 3,¹ most of which was done in the open, but, due to the proximity to the Potomac, cofferdams were used for the sub-footings. Concrete sub-footings for the south abutment and wing walls were started on June 29, with the sub-footings for the north abutment following. Both were completed by July 31.² Following this, the footings were poured, and then alternating lifts of brickwork were laid and concrete backing poured. The remainder of the work was carried on using this alternating method. Expansion joints were provided for between the wing walls and arch/abutment, and therefore they are entirely separate from each other.³ To complete this project, a dock house belonging to Fort Hunt had to be moved and an obsolete concrete manhole had to be removed. This was completed under an extra work order and finished by August 30.⁴

The brick arch ring was built on the same centering used for the concrete arch, with the brick facing of the spandrel being built after the arch barrel was poured. The arch barrel was poured in three sections and was completed on September 19, with the wing and spandrel walls being completed on September 27. Membrane waterproofing was installed on the backs of the wings, abutments, spandrel walls, and the extrados of the arch. This work took place between September 23 and October 7. The area behind the abutments and between the wing walls was then backfilled, mostly with waste from the excavation.⁵ In conjunction with the brick, an Indiana limestone was used for the coping. The limestone was set in place November, 1930.

Landscape architect/designer for this project was Gilmore D. Clarke. Clarke had become recognized as an expert in this type of parkway design due to his work on the Bronx River Parkway and his position on the Westchester County Park Commission. Two engineers oversaw the project, E.J. Budge,

¹ U.S. Department of Agriculture, Mount Vernon Memorial Highway Final Construction Report on Unit III Bridges. Bureau of Public Roads, (1932): 134.

² ibid, 135.

³ ibid, 136.

⁴ ibid, 138.

⁵ ibid, 137.

Associate Highway Bridge Engineer, was the Resident Engineer, with J.L. Shotwell, Junior Draftsman, as Assistant Resident Engineer.⁶ Total cost for the Fort Hunt Overpass including the extra work order was \$74,715.85.⁷

The Fort Hunt Overpass is the only bridge along the Mount Vernon Memorial Highway which is faced in brick rather than stone. Research, to date, has not uncovered the reason for that particular decision. Although the facing is of brick, the bridge still manages to blend into the surrounding landscape, which was the end goal of the designer.

⁶ ibid, 138.

⁷ ibid, 139.

Bibliography

EDAW, Incorporated. Historic Resources Study, Mount Vernon Memorial Highway. Volume I: History. Appendix E: Specifications for Bridges. Alexandria, VA: June 19, 1987, 90% submittal. Located at George Washington Memorial Parkway Headquarters at Turkey Run in Virginia.

U.S. Department of Agriculture. Mount Vernon Memorial Highway, Drawings for Fort Hunt Overpass. Title sheet #G565-570. Numbered G-565, 566, 567, 568, 569, 570, 611, 612, 613, 614. Also numbered 850/80158, part of a total set of drawings on the Mount Vernon Memorial Highway, December, 1929. Located at National Capital Region Park Headquarters, Washington, D.C.

U.S. Department of Agriculture. Mount Vernon Memorial Highway Final Report on Unit III Bridges. Bureau of Public Roads, 1932. Located at U.S. Department of Federal Highways Administration, Arlington, VA.